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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/850,356	05/07/2001	Allen J.C. Porter	00100.00.1280	2286

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EXAMINER	
HENEGHAN, MATTHEW E	

ART UNIT	PAPER NUMBER
2134	

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/850,356	PORTER ET AL.	
	Examiner	Art Unit	
	Matthew Heneghan	2134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 March 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,8-16 and 19-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *34* is/are allowed.

6)☒ Claim(s) *1-5,8,9,16,19-28 and 33* is/are rejected.

7)☒ Claim(s) *10-15 and 29-32* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 March 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. In response to the previous office action, Applicant has amended claims 1, 9, 11, 16, 19, 20, 27, and 28; cancelled claims 6, 7, 17, and 18; and added claims 33 and 34. Claims 1-5, 8-16, and 19-34 have been examined.

Drawings

2. The drawings were received on 28 March 2005. These drawings are acceptable.

Specification

3. In view of Applicant's amendments, all previous objections to the specification are withdrawn.

Claim Rejections - 35 USC § 112

4. In view of Applicant's amendments, all previous rejections under 35 U.S.C. 112 are withdrawn.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-5, 9, 20-24, and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by WIPO Patent Application No. 02/25416 to Girard et al.

Regarding claim 1, Girard discloses a graphics controller, which displays rendered data (thus inherently includes a graphics rendering engine) (see p.5, second paragraph), that contains a frame buffer memory having both secure and insecure frame buffers (see p.7, second paragraph). The exemplary embodiments are improvements upon graphics controllers in a PC environment (see p.2, second paragraph), which inherently uses a user bus to interface (i.e. is coupled) with the graphics controller.

Registers in the processor are non-secure by default, and are configured to become secure (see p.7, last paragraph, continuing onto p.8).

As per claim 2, the corners of a secure area are defined by registers (access registers) (see p.7, third paragraph).

As per claim 3, there is an embodiment wherein the security coordinates in the access registers cannot be changed once they have been defined (initialized) (see p.8, second paragraph).

As per claim 4, the secure area may only be read by a client via the secure interface, while other clients may read the insecure area through other interfaces (see p.8, last paragraph, continuing onto p. 9).

As per claim 5, the register is inherently programmable.

As per claims 9 and 33, the controller may return erroneous data in response to an illegal request (see p.9, third paragraph).

As per claims 20-24, the frame buffer memory is wholly contained within the graphics controller memory (see p.5, second paragraph), thus making it "local."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over WIPO Patent Application No. 02/25416 to Girard et al.

Girard, as described above, does not disclose the type of register to use as the access register.

Official Notice is given that it is well-known in the art to use non-volatile memory for registers in order to preserve the contents of the register in the event of a computer power cycle.

Therefore it would be obvious to one of ordinary skill in the art to implement the system of Girard by using non-volatile registers, in order to preserve the contents of the register in the event of a computer power cycle.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over WIPO Patent Application No. 02/25416 to Girard et al. as applied to claim 4 above, and further in view of U.S. Patent No. 4,787,031 to Karger et al.

Girard does not disclose how it is determined whether or not a client is entitled to secure access.

Karger discloses a memory protection system having a privilege register to determine whether or not to allow perform operations (see column 11, lines 3-11). This prevents an instruction from being executed when the processor is in the wrong operating mode (see column 3, lines 50-56).

Therefore it would be obvious to one of ordinary skill in the art to implement the system of Girard by using a privilege register to determine access, in order to prevent an instruction from being executed when the processor is in the wrong operating mode.

8. Claims 16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,825,879 to Davis in view of U.S. Patent No. 6,148,403 to Haneda et al.

Regarding claim 16, Davis discloses a package wherein a frame buffer memory (see column 5, lines 40-45) is used on a computer that communicates using a PCI bus (a user bus) (see column 3, lines 44-53). Encryptors encrypt and decrypt data passed to and from the frame buffer memory (see column 5, lines 18-46).

Davis does not disclose the selective encryption of data.

The apparatus disclosed by Haneda allows for the selective encryption of data into a buffer for a graphics controller (i.e. a frame buffer) based upon the value of a flag (see column 14, lines 14-26). Haneda further suggests that this solves a problem wherein secret data can be viewed by others (see column 1, lines 54-61).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Davis by allowing for selective encryption, as this solves a problem wherein secret data can be viewed by others.

Regarding claim 19, Davis' apparatus can have a plurality of clients.

9. Claims 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over WIPO Patent Application No. 02/25416 to Girard et al. as applied to claim 23 above, and further in view of U.S. Patent No. 5,107,443 to Smith et al.

Though Girard discusses security considerations, details of the implementation of a memory access protection module is not disclosed.

Smith discloses the consideration of "levels of privacy," wherein access may be denied to a private graphical region (see column 10, lines 34-60), and further suggests that this property allow for a shared workspace, which allows a user to share the contents of a private workspace without a cumbersome transfer operation (see column 3, line 60 to column 4, line 9).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to implement the invention of Girard by using levels of privacy, as this property allow for a shared workspace, which allows a user to share the contents of a private workspace without a cumbersome transfer operation.

Allowable Subject Matter

10. Claim 34 is allowed.

11. Claims 10-15 and 29-32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter:

Claim 34 fully incorporates the limitations of previous claim 18, which was indicated as containing allowable subject matter.

Claims 10-15 and 29-32 are indicated as allowable for the reasons stated in the previous office action.

Response to Arguments

13. Regarding Applicant's arguments with respect to the rejections of claims 16 and 19 (see Remarks, file 28 March 2005, pp. 12-14), Applicant's arguments have been fully considered but they are not persuasive.

Regarding Applicant argument that the modification of Davis' invention to allow for selective encryption would render Davis' invention inoperative and/or redundant, no reason can be seen why the modified invention would not work or not have utility.

In response to applicant's argument that Haneda is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, though Haneda teaches a different application that does Davis, Haneda's system is applicable to any kind of graphics controller and it would be reasonable for one skilled in the art to use Davis' controller in the context of Haneda's system. The modification to Davis' controller, as described by Haneda, would be essential in order for it to suit Haneda's stated needs.

Regarding Applicant's arguments with respect to the rejection of claim 8, in response to applicant's argument that the invention disclosed by Karger contains features that would not make it combinable with Girard, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). The additional features of Karger that teach away form claim 8 are not necessary to the combined invention. The modifications that one skilled in the art would make in view of Karger would teach to all of the limitations of the claim.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew E. Heneghan, whose telephone number is (571) 272-3834. The examiner can normally be reached on Monday-Friday from 8:30 AM - 4:30 PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse, can be reached at (571) 272-3838.

Any response to this action should be mailed to:
Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, VA 22313-1450
Or faxed to:
(703) 872-9306

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MEH

June 21, 2005

David Y. Jung
Primary Examiner

6/24/05